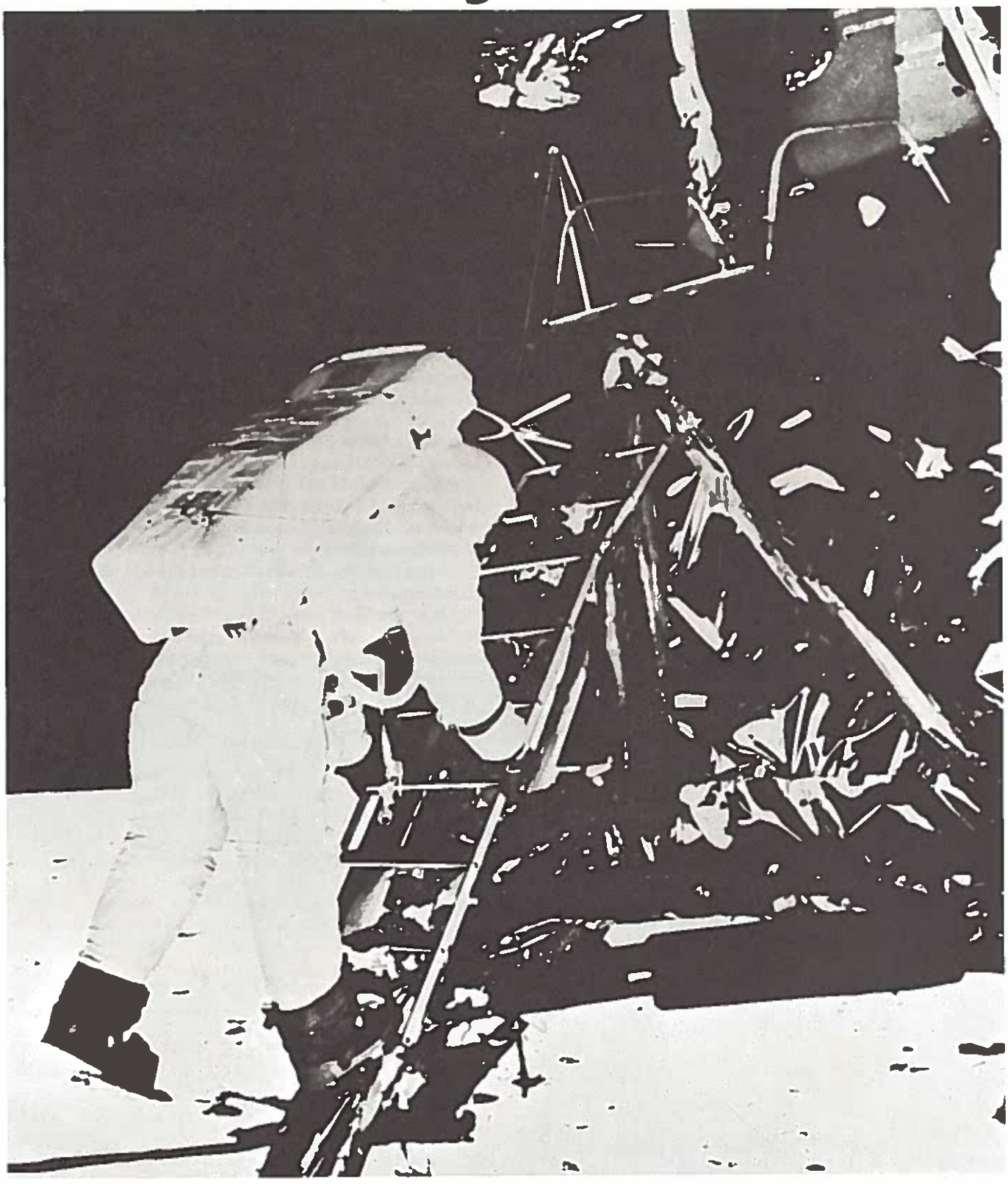
'Houston...Tranquility base here. The Eagle has landed'



How others see us–consider...remember

"A spirit of criticism, if indulged in, leads to a censoriousness of disposition that is destructive of all nobler feelings. The man who lives to find faults has a miserable mission."

–Henry Wadsworth Longfellow

An appraisal of one's efforts can enlighten and reward one, and give insight and understanding to the recent past and provide help in charting future endeavors.

But self-criticism, when it dwells only on shortcomings, can be self-defeating.

Ah! So easy it is to forget–not just the recent past but the present as well!

Consider . . . and remember . . .

We are in a new era.

We've been there since 4:17:40 p.m. Sunday, July 20, 1969.

Hundreds of millions listened as Apollo 11 commander Neil Armstrong announced:

"Houston. Tranquility Base here. The Eagle has landed."

So Plane News recorded the epic adventure that placed the first human being on the surface of earth's satellite. Within minutes, Ed "Buzz" Aldrin had joined Armstrong on the moon, as the mother ship, Columbia, flew its lunar orbits with Mike Collins the lonely man in space.

More than 300,000 people in more than 20,000 companies had worked hard and closely together to achieve the dream. For Grumman, it marked almost a decade of work, beginning with a preliminary study in 1960, which was rejected by the National Aeronautics and Space Administration (NASA). The Company tried again, and failed. But on the third try, Grumman won what was then called the Lunar Excursion Module, later shortened by exclusion of Excursion.

The triumph of July 1969 gained high polish two months later when Armstrong and Aldrin came to Bethpage for a visit. Said Armstrong:

"We didn't come today to make speeches, but just to congratulate you for your excellence and to thank you for giving us one grand spacecraft." And he added that, "I've flown a lot of Grumman airplanes . . . I've always admired their craftsmanship, their reliability."

Buzz Aldrin commented that "I would like . . . to shake the hand of each one of you. Apollo was more than three men going to the moon, more than the government and industry teams: it was America, it was the world. Each American can now stand taller, especially you people here, because *you* made it possible."

To George Skurla, then director of Operations for Grumman at the Kennedy Space Center, came letters of appreciation from top NASA people for the success of the Apollo 11 LM-5 mission. Dr. Kurt Debus, NASA's director at KSC, wrote in part, "The Lunar Module is a unique machine, reflecting the skills of the Grumman team that manufactured it and prepared it for launch." And Rocco Petrone, Apollo Program director, noted that "You and your organization performed in superior fashion from the initial site activation efforts for our first Lunar Module launch from LC-37 and through the successful launches of this spacecraft and those following (LM-3 through LM-6 at Launch Complex 39)."

Then, in April of 1970, came the aborted Apollo 13 LM-7 (Aquarius) flight. The Command Service Module was crippled, so Aquarius functioned as a "lifeboat" to bring the astronauts home safely.

From the White House, President Richard Nixon wrote in part to Lew Evans:

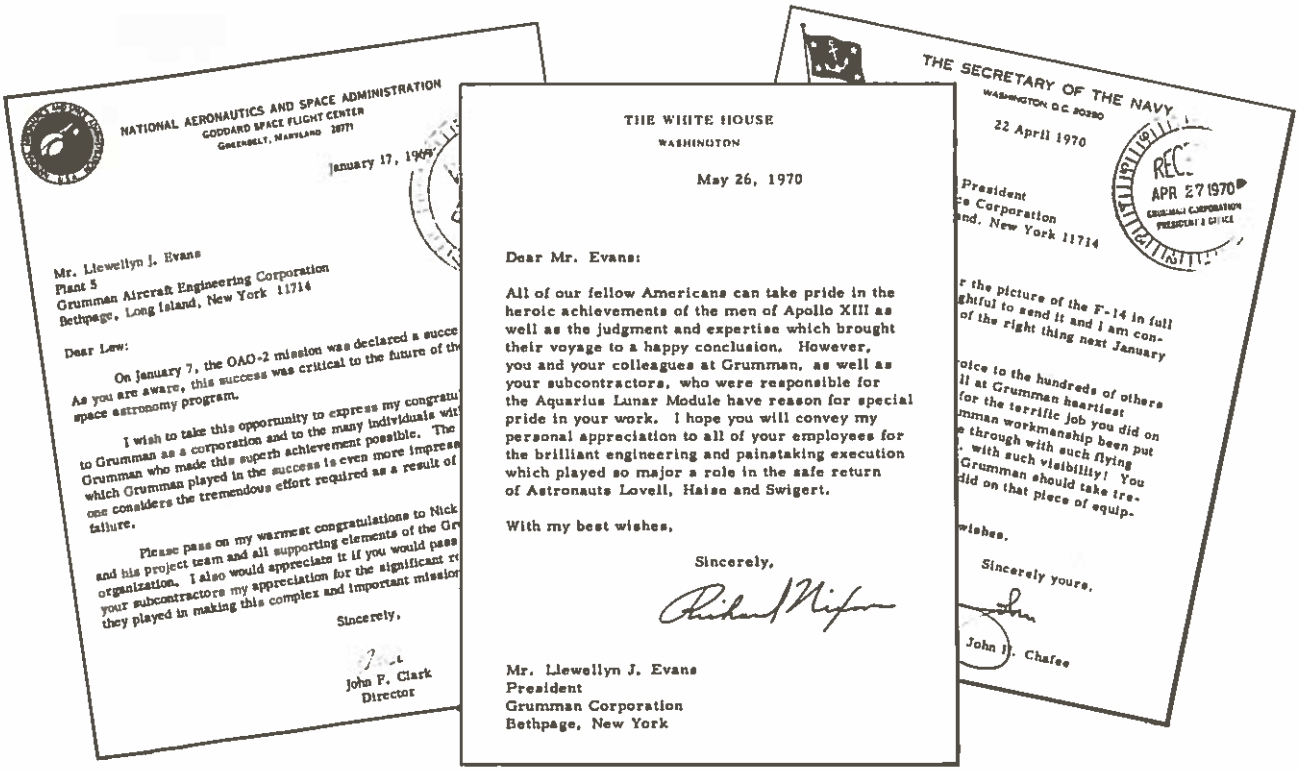
". . . you and your colleagues at Grumman, as well as your subcontractors, who were responsible for the Aquarius Lunar Module have reason for special pride in your work. I hope you will convey my personal appreciation to all of your employees for the brilliant engineering and painstaking execution which played so major a role in the safe return of Astronauts Lovell, Haise, and Swigert."

Tom Paine, NASA Administrator–like many others–sent a letter of congratulations to Evans:

"I am writing to express my appreciation for the help you gave us during the critical hours of the Apollo 13 mission which proved to be very important to the safe return of the astronaut crews . . . Indeed, the Grumman Corporation and its fine team of subcontractors can take pride in the operation of the Lunar Module which served both as a lifeboat for the crew and as a tug for the more massive Command and Service Modules."

Many others sent their congratulations, among them Secretary of the Navy John Chafee, Associate Administrator for Manned Space Flight Dale Myers, and Manager of the Apollo Program Col. Jim McDivitt. "The Lunar Module," said McDivitt, "was never designed for the job it was called upon to perform; however, a well-built spacecraft of good design can do anything. I hope that we never again have to call upon the Lunar Module to perform as it did on Apollo 13; but if we do, I am confident that it will once again perform like LM-7."

For the men and women of Grumman, perhaps the greatest salutes of all came from the visiting Apollo 13



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771

January 17, 1970

Mr. Llewellyn J. Evans
Plant 5
Grumman Aircraft Engineering Corporation
Bethpage, Long Island, New York 11714

Dear Lew:

On January 7, the OAO-2 mission was declared a succe
As you are aware, this success was critical to the future of th
space astronomy program.

I wish to take this opportunity to express my congratu
to Grumman as a corporation and to the many individuals wit
Grumman who made this superb achievement possible. The
which Grumman played in the success is even more impress
one considers the tremendous effort required as a result of
failure.

Please pass on my warmest congratulations to Nick
and his project team and all supporting elements of the Gr
organization. I also would appreciate it if you would pass
your subcontractors my appreciation for the significant r
they played in making this complex and important mission

Sincerely,

John F. Clark
Director

THE WHITE HOUSE
WASHINGTON

May 26, 1970

Dear Mr. Evans:

All of our fellow Americans can take pride in the heroic achievements of the men of Apollo XIII as well as the judgment and expertise which brought their voyage to a happy conclusion. However, you and your colleagues at Grumman, as well as your subcontractors, who were responsible for the Aquarius Lunar Module have reason for special pride in your work. I hope you will convey my personal appreciation to all of your employees for the brilliant engineering and painstaking execution which played so major a role in the safe return of Astronauts Lovell, Haise and Swigert.

With my best wishes,

Sincerely,

Richard Nixon

Mr. Llewellyn J. Evans
President
Grumman Corporation
Bethpage, New York

THE SECRETARY OF THE NAVY
WASHINGTON, D.C. 20350

22 April 1970

REC'D
APR 27 1970
GRUMMAN CORPORATION
PRESIDENT'S OFFICE

President
e Corporation
ad, New York 11714

r the picture of the F-14 in full
ghtful to send it and I am con-
of the right thing next January

oice to the hundreds of others
ll at Grumman heartiest
for the terrific job you did on
mman workmanship been put
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. with such visibility! You
Grumman should take tre-
did on that piece of equip-

wishes.

Sincerely yours,

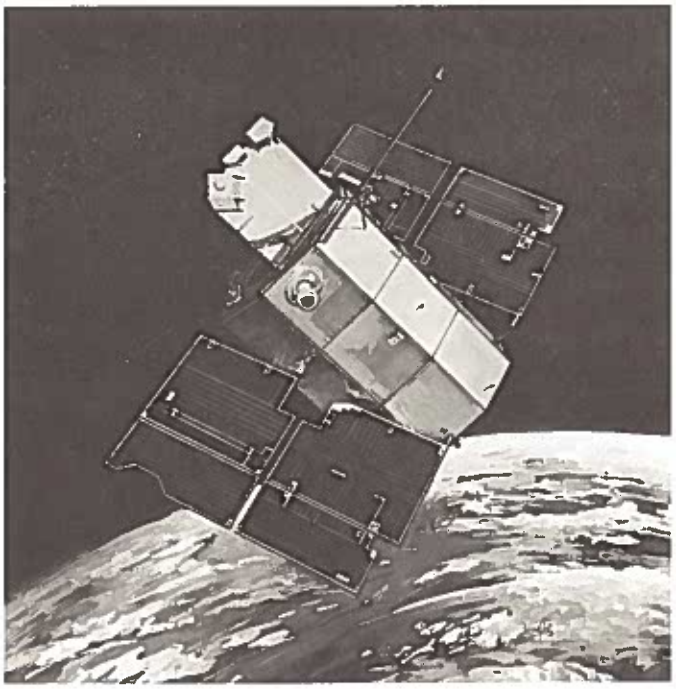
John J. Chafee

Astronauts. "We thought when we were out there floating in the Command Module in the water, 'If we don't do anything else, let's get back up to Grumman and say 'Thanks,' " said Jim Lovell. Fred Haise told the crowd, "I hope to have another chance to fly the LM, and I'm just as optimistic for the next one as I was for LM-7." Jack Swigert capped it:

"You know there was an awful lot of teamwork on the ground . . . but with Apollo 13, there was one brief moment when all the people of the world were united."

From the many tributes, too, there was one for Senior Vice President Joe Gavin, who, on behalf of the Grumman team, was presented with the NASA Distinguished Public Service Medal.

OAO 'major technological achievement'



It would seem that LM was the only space achievement, but it certainly wasn't. Grumman/NASA also had the somewhat astonishing Orbiting Astronomical Observatory (OAO), placed in space for supposedly a month's service . . . and it's been functioning for three and a quarter years. In June of last year, Arthur D. Code, Joel Stebbins Professor of Astronomy at the University of Wisconsin, wrote Lew Evans to say that his investigators "are presently obtaining higher quality data than a year ago. This is because of operational experience gained over these 2½ years of operation by both your ground crew and the astronomers using this national facility.

"The versatility of the spacecraft and telescope systems has made the OAO just what its name implies, a space observatory capable of carrying out a wide diversity of astronomical measurements." And he added that "The scientific yield continues to be high."

At the thousand-day mark several telegrams noted the accomplishment. Two were of special note. Edward E. David Jr., science adviser to President Nixon, wrote:

"Congratulations on the scientific success of OAO-2 made possible by the teamwork between the principal investigators, the contractor, and the Goddard Space Flight Center of the National Aeronautics and Space Administration. Your combined efforts have produced significant gains in the field of astronomy and in our understanding of the universe and its processes."

Jesse L. Mitchell, director of Physics and Astronomy Programs, Office of Space Science and Applications: "A thousand days of successful OAO-2 operation is a major technological achievement. . . . I am proud of the outstanding scientific results presented . . . at the OAO-2 symposium in Amherst and hope that the team's hard work, long hours, and anxieties are compensated partially by their contribution to the discoveries in astronomy."

Standing ovation for F-14 team

If a lot has been done recently in the areas of space work, the same may be said of aircraft accomplishments. Without

question, the steady progress of the Tomcat air superiority fighter program is very heartening.

Adm. Elmo R. Zumwalt Jr., Chief of Naval Operations, recently testified before an ad hoc subcommittee of the Senate Committee on Armed Services, that " . . . the Navy set about to produce an advanced fighter able to cope with the entire air threat spectrum foreseen through the mid-1980's. I believe that we have done this in the F-14."

Evidence of that came from the first Tomcat Navy Preliminary Evaluation (NPE) report. Cdr. George H. White, team leader, Naval Air Test Center at Patuxent River, Md., wrote, in part:

"December 1971 marked the completion of several . . . outstanding technical and production accomplishments, notably:

The . . . NPE 1 was successfully completed and lasted 15 days "with an accumulation of 39 flights totaling 74 flight hours. This feat has never been achieved before in Naval aviation and attests to the reliability and quality of the F-14A when one compares the results of the F-14A NPE 1 with the average of all past Navy fighter NPE's since the early 1950s. More specifically, past NPEs yielded an average of only 18 flights and 20.4 flight hours over a 14 day period."

Among the items that "enhance the F-14's ability to perform the fighter mission" said the NPE report were "Exceptionally low approach speeds in the power approach configurations" . . . "Takeoff performance" . . . "The level of acceleration in maximum afterburner" . . . "Outstanding transonic flying qualities" . . . "Outstanding controllability at high angles of attack" . . . "Outstanding maintainability features . . . "

That's not all. Something special occurred, something people say has never happened before: Immediately prior to reading the NPE results, Commander White declared, "I would like to have my team stand up and give a rounding sound of applause for one of the best damn teams out of the Grumman group here that has provided some of the best support the Navy has ever seen."

In addition, the transition of Tomcats from Calverton to the Navy's west coast Pacific Missile Range has brought plaudits from Rear Admiral L. A. (Swoose) Snead. "I was particularly pleased," he said, "to note the speed and competence with which the integration of the AWG-9 weapon control system was accomplished in Aircraft No. 4.

"This performance reflects the dedication to the task of our team at Point Mugu."

'Plane for all seasons'

Certainly, the A-6 family has prospered. The all-weather attack aircraft, the A-6A, called "A plane for all seasons" by Time Magazine, has been lauded many times. Take the

comments of Capt. Bob Mandeville, the man who's in charge of A-6s for the Navy—and the first pilot to chalk up more than 2,000 flight hours in the Intruder:

"The concept of the A-6 Intruder has never changed. The people who designed and built that aircraft picked a real winner."

Says Lt. Cdr. Roger Smith, a bombardier-navigator who's also logged in more than 2,000 flight hours, "The A-6? There's no equivalent aircraft." Cdr. Bill Small voices similar

sentiments, saying, "This A-6 is a tremendously fantastic airplane—the best I've ever flown." As Captain Mandeville has phrased it, "The A-6 is not just an aircraft. It's a national asset."

E-2C shows 'excellent potential for AEW'

Another aircraft, the E-2B Hawkeye, got good marks on its report card, too. Following a unique field reliability demonstration of the plane's computer programmer and power sweep assembly, Adm. Tom McClellan ticked off several strong points and remarked that "In this time of National concern and criticism of the so-called 'Military-Industrial Complex,' it is especially noteworthy that this demonstration was conducted at no increase in contract price. Well done!"

And after the first NPE (Navy Preliminary Evaluation) of the latest Hawkeye, the Navy E-2C, the team's sum-up was:

"The E-2C systems evaluated exhibited excellent potential for the carrier-based airborne early-warning and tactical control mission and are a significant improvement over comparable E-2A/B systems."

The E-2C flight development team has been doing very well for more than a year now, starting with its first flight in January 1971, one month ahead of schedule. Last June, the Defense Systems Acquisition Review Council gave the Navy and Grumman a firm production "go" for the E-2C following an in-depth evaluation of the Hawkeye's new systems hardware.

EA-6B 'vital weapons system'

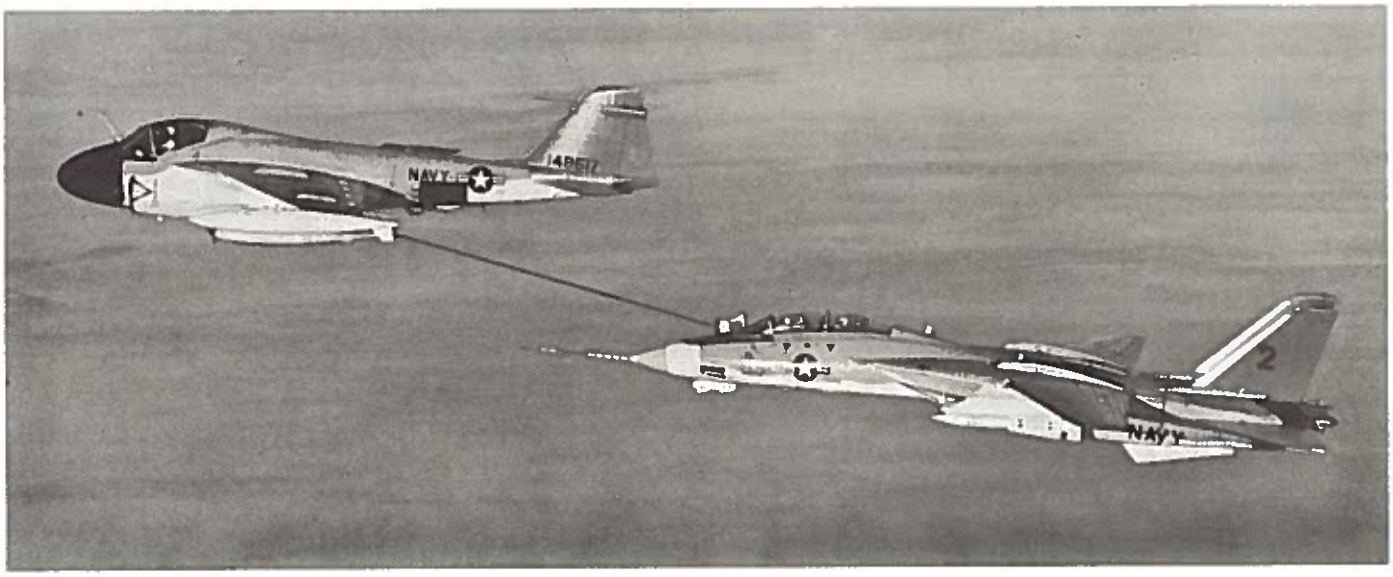
Whenever something new and truly meaningful occurs it deserves close attention—and such was the Fleet introduction of the EA-6B. It came at Whidbey, and the Navy message reads, in part, that "The sophisticated EA-6B, the Navy's newest and most advanced electronic warfare aircraft, offers a potent EW (Early Warning) capability never before available in carrier aviation." Actually, two EA-6Bs arrived on the scene to be used in "high tempo of operational and maintenance training," says the report. One of the pair is a pre-production aircraft, and according to the Navy message, "The assignment of this . . . aircraft has been singularly the most important asset to the squadron's maintenance training program. (The plane's) arrival at a time when this command has the greatest

number of maintenance personnel to train with minimum assets was and will continue to be instrumental in meeting important maintenance capable milestones. In addition, (the aircraft) has been involved with flight crew ground systems."

The message ends with the statement that "With the arrival of the EA-6B a new dimension has been added to the Fleet's airborne EW capability. As training continues and tactics are developed, we move ahead to further develop this vital weapons system."

KA-6D 'best in the business'

Much the same can be said of the KA-6D tanker, lauded by Lt. Cdr. Gary Wheatley of VA-115 aboard the carrier USS Midway. In an article for Naval Aviation News, Commander Wheatley remarks that "The squadron soon found that the tanking capability of the KA-6D was superb and the training syllabus was modified to exploit that capability . . . A rendezvous with that KA-6D provided the capability of



packing more training into every flight and thereby accelerating the training syllabus.

"The area best exploited, however, was field carrier landing practice." Commander Wheatley praises the KA-6D's "airframe reliability" and calls the aircraft "the best carrier-based tanker in the business."

Another winner is the Army's Mohawk. One of the pilots who can verify that had a hair-raising experience a couple of years ago in South Vietnam. Maj. Joseph Kennedy of the 131st Surveillance Aircraft Company was flying a mission when his OV-1 Mohawk took a direct hit in the aft fuselage, punching out three gaping holes. His plane was afire and his observer wounded, but he snuffed out the flames by side-slipping, and he brought the ship home. His taciturn comment was, "They sure build 'em tough."

And down south, in Stuart, Florida, where the Army OV Mohawks were fabricated, Col. Clifton O. Duty said "Grumman has built some wonderful planes for the Navy and for the Army . . . They're hard to knock down."

Calls Gulfstream II 'magnificent airplane'

Still in the aircraft world, but this time on the commercial side, Grumman Gulfstream IIs have proved their mettle. For example, Kaiser Industries flies two of them, and early last year one flew an around-the-world 100-day journey. According to Kaiser's manager of aviation, "We flew (it) constantly for 100 days nearly all over the world, in and out of all kinds of airports, with no problems. It's a magnificent airplane. A tiger."

Also, in a Forbes Magazine ad, Xerox says it "is meticulous about the quality of its products in the fields of education, business equipment, and computers. They are just as meticulous about the quality of the aircraft they buy.

Xerox has just taken delivery on the one hundredth Gulfstream II made by Grumman. It has long been our contention that the one characteristic shared by all corporations who own Gulfstreams is progressive management . . . Only a Gulfstream offers the features of range, speed, comfort, and utility that make this fan jet such a dynamic sales tool . . . "

The evidence is there.

We must be doing something right!

Special supplement
Grumman Plane News
April 17, 1972